R E P O R T R E S U M E S

ED 013 928 VT 002 354

HANDBOOK ON EMPLOYMENT SECURITY, JOB MARKET, RESEARCH METHODS--AREA SKILL SURVEY.

BUREAU OF EMPLOYMENT SECURITY, WASHINGTON, D.C.
REPORT NUMBER BES-E-252 PUB DATE NOV 65
EDRS PRICE MF-$0.25 HC-$1.92 48P.

DESCRIPTORS- *RESEARCH METHODOLOGY, *OCCUPATIONAL SURVEYS, *GUIDELINES, QUESTIONNAIRES, EMPLOYMENT TRENDS,

AREA SKILL SURVEYS ARE DESIGNED TO PROVIDE COMPREHENSIVE INFORMATION IN INDIVIDUAL LABOR AREAS OF CURRENT EMPLOYMENT AND FUTURE LABOR REQUIREMENTS, BY SPECIFIC OCCUPATIONS, AND TO ASCERTAIN TRAINING NEEDS TO FULFILL THESE REQUIREMENTS. THIS HANDBOOK DESCRIBES PROCEDURES AND TECHNIQUES TO BE USED IN THE SURVEY. IT INCLUDES THE PRELIMINARY WORK PRIOR TO INITIATING THE SKILL SURVEY, INFORMATION TO BE COLLECTED FROM EMPLOYERS, METHOD OF COLLECTING THE DATA, A SAMPLE PUBLICITY RELEASE TO INSURE COMMUNITY AWARENESS OF THE SURVEY'S IMPORTANCE, AN EXAMPLE OF A PRESURVEY LETTER, NONRESPONSE FOLLOWUP PROCEDURES, INSTRUCTIONS FOR PARTIAL RESPONSE, A SAMPLE SURVEY SCHEDULE WITH INSTRUCTION FOR ITS PREPARATION, SELECTION OF THE EMPLOYER SAMPLE, INSTRUCTIONS FOR TABULATING THE SURVEY DATA, A SAMPLE QUESTIONNAIRE FOR OBTAINING FUTURE LABOR SUPPLY FROM SCHOOLS AND OTHER ORGANIZATIONS, METHODS FOR SUMMARIZING THE DATA, AND AN OUTLINE FOR PRESENTATION OF THE SURVEY FINDINGS. (FS)

BES No. E-252
November 1965

ED013928

Handbook on

Employment Security
Job Market
Research Methods

AREA SKILL SURVEY

VT002354

U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION
Washington, D.C. 20210

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

BES No. E-252
November 1965

Handbook on

Employment Security
Job Market
Research Methods

AREA SKILL SURVEY

BUREAU OF EMPLOYMENT SECURITY – ROBERT C. GOODWIN, ADMINISTRATOR
U.S. Employment Service – Louis Levine, Director

Table of Contents

	Page
I. Introduction	1
A. Need for Occupational Job Market Information	1
B. Description of Area Skill Survey	2
II. Methodology	4
A. Preliminary Work Prior to Initiating the Skill Survey	4
B. Scope of the Skill Survey	4
C. Information To Be Collected From Employers	9
D. Method of Collecting the Data	10
1. Sample of Publicity Release	11
2. Example of Pre-survey Letter	12
3. Schedule for Area Skill Survey	18
E. Selecting the Employer Sample	23
F. Tabulating the Survey Data from Employers	25
1. Worksheet Formats	25
2. Sample Inflation Procedure	25
3. Inflation of Sample Data by Industry and Occupation	29
4. Instructions for Completing Worksheet D	29
G. Estimating Trained Labor Supply Available at Later Periods	31
1. Estimating New Entrants	31
2. Estimating Available Qualified Worker Supply	33
H. Summarizing the Data	34
III. Presentation of Area Skill Survey Findings	41

HANDBOOK ON EMPLOYMENT SECURITY JOB MARKET RESEARCH METHODS--AREA SKILL SURVEY

I. INTRODUCTION

A. Need for Occupational Job Market Information

Occupational job market research, such as the area skill survey technique, is directed toward an evaluation of job opportunities in relation to available labor supply in a particular occupation or group of occupations. This evaluation includes a study of the relationships of the number and characteristics of the anticipated labor supply to occupational labor demand, expressed in terms of job requirements, employer specifications, hiring and promotional opportunities, and legal restrictions affecting employment. Depending upon the occupations studied and the need for the information, occupational job market information can be prepared for an area, a State, or a region.

Since most workers seek employment in specific occupations and employers usually hire workers with particular skills or abilities, occupational job market information is paramount to a meaningful and practical understanding of the functioning of the job market. Such information has many important operational uses, some of which are as follows:

Employment counseling: Sound vocational choice depends not only on worker aptitudes and qualifications, but also on information about employment opportunities in different occupations.

Job development: Information about the industries and establishments which employ workers in particular occupations is a useful guide in the development of suitable opportunities for individual jobseekers.

Community employment development: A major contribution that local employment offices can make to community economic development and industrial expansion is the supplying of information about local manpower resources, including the occupational qualifications of employed and unemployed workers.

Training: Vocational training programs of both employers and the schools should be tailored to occupational manpower requirements and resources.

Employer services: Employer relations representatives and other local office personnel can improve their services to employers if they have a better understanding of each employer's occupational needs and how they fit into the overall job market picture in the community.

Civil defense and mobilization planning: Information on the occupational composition of the labor force of individual areas is an important tool for identifying the sources of the types of workers that may

be needed for civil defense emergency activities. In times of mobilization, facts about occupational labor demand and supply are essential for manpower program purposes. The area skill survey and other job opportunities information programs provide a basic point of departure for the development of the specific data needed for both civil defense and mobilization activities.

Job market information: In addition to its specific program uses, widely disseminated occupational job market information provides a sounder basis for independent job market decisions of individual workers and employers.

Periodic reappraisal of the occupational composition of local labor areas is necessary to meet these needs. In any one State or area, occupational requirements may change markedly as old industries decline and new activities develop.

B. Description of Area Skill Survey

Area skill surveys are designed to provide comprehensive information in individual labor areas of current employment and future labor requirements, by specific occupations, and to ascertain training needs to fulfill these requirements. More specifically, the major objectives of an area skill survey are: (1) to supply information about job opportunities in the area for use in employment counseling; (2) to provide a tool for local office use in job development activities; (3) to augment information about local manpower resources for use in community employment development; (4) to promote training courses in local schools and apprentice training, geared to the occupational labor requirements of the area; and (5) to stimulate local employers to evaluate their manpower needs and promote necessary in-plant training. These surveys also provide a basis or a "benchmark" for planning and carrying out a continuing program of individual occupational releases or guides for use in counseling.

Skill surveys are valuable both in areas of substantial unemployment as well as in those with relatively significant shortages of specific worker skills. In the former situation, the survey may be used to determine specific occupational categories with relatively large unemployment and the industries in which such occupations predominate. This information is necessary for effective long-range planning of industrial development and skill retraining programs to promote efficient utilization of the area's labor force. The surveys may also be useful in identifying other occupations where there is significant labor demand despite overall substantial unemployment within the area. Under labor shortage conditions, data from area skill surveys are essential for determining the extent of skill shortages and for conducting subsequent recruitment or training programs to meet the need for skilled workers in the area.

HANDBOOK ON EMPLOYMENT SECURITY JOB MARKET RESEARCH METHODS--AREA SKILL SURVEY

The area skill survey involves the collection of basic data, mostly from employers, on (1) current employment in selected occupations; (2) employment requirements by occupation for some future date (usually 2 and 5 years hence); (3) training programs and numbers of workers in training; (4) interest in, and need for, pre-employment or supplementary vocational training; and (5) where feasible, data by occupation on recent turnover, hard-to-fill jobs, new and emerging occupations, and the effects of technological change. These data provide the basis for estimating community manpower requirements, by occupation, for selected industries or occupations and for individual employers. Analysis of the available labor supply, including a study of the number of apprentices and workers in other in-plant training programs, the number of students enrolled in vocational or professional training programs in the schools (below the 4-year college level), and the number registered for work with the Employment Service, will provide information about sources of trained labor supply in the community.

State agencies should conduct an area skill survey whenever an obvious need exists for the type of occupational information which this research can furnish. An area skill survey, as distinct from a training needs survey, should be undertaken when conditions identical or similar to the following occur: (1) If long-range (2-5 years) occupational data are desired; (2) if it is desirable to determine total needs for an occupation, or occupations, in an area (rather than to develop just enough information to initiate one or more training courses); and (3) if the community's interests require a profile of the area's occupational needs rather than only one or a few occupations. Such community interest would be reflected, for example, in a desire to obtain the data as an aid in areawide employment counseling, vocational guidance, or industry resource information.

In most cases, in order to insure the validity and applicability of the occupational forecasts, an area skill survey should be updated within 2 to 3 years of the initial survey. In updating these surveys, the State should plan to appraise area skill survey findings and their application in the community. This appraisal should include an analysis of employer forecasts. This can be done only where the timing of the updated survey corresponds to the employer forecast periods used in the previous survey or surveys. When such appraisals are planned, the Bureau should be informed in advance of the methodology to be used.

II. METHODOLOGY

A. Preliminary Work Prior to Initiating the Skill Survey

Before the survey is actually begun, it is usually desirable to organize a sponsoring community group (which might be called the _____ Area Manpower Council) if a Manpower Advisory Committee or similar organization does not already exist. The council or community group should represent those with an interest in the local manpower situation, and, insofar as possible, should include top personnel from such groups as chambers of commerce, apprentice training agencies, schools, labor unions, and major employing establishments.

Other informed persons in the community should be consulted for their suggestions regarding needed occupational information. This is of utmost importance and should be carried out during the first stages of planning for an area skill survey. These consultations will be helpful, not only as a device for enlisting interest, support, and cooperation of the community in occupational job market information programs, but also in defining the scope of the survey and in implementing the findings of the study.

For a meaningful study, clear definition of the geographical boundaries of the labor area covered is necessary. The boundaries should be the same as those for the labor area as defined under the ES-219 labor area reporting program. Unless data resulting from the study are comparable with other area information, their usefulness will be limited.

In determining the occupations to be studied, careful consideration generally is given to (1) known surplus and shortage occupations in the area as indicated by local office records or other available data; (2) significant occupations (in terms of the number of workers in these occupations) in the area which require more than casual on-the-job training; (3) future demand occupations; and (4) other occupations which may be smaller in terms of number of workers but are a particular problem or are of especial interest in the area. (See pages 6-8 for a further description of these factors.)

The following procedures present a general approach for conducting area skill surveys and should be modified as necessary to meet the specific needs of a particular labor area.

B. Scope of the Skill Survey

In most areas, emphasis usually should be directed to occupations requiring considerable training time - perhaps 1 year or more - but below the 4-year college level. The occupations normally should fall in the semi-professional, technical, skilled, and semi-skilled groups, although in certain areas it may be desirable to include clerical and service occupations if they are of particular significance. Also, for practical reasons,

it may be necessary to limit the occupational coverage to specific types of occupations, or to occupations in selected industries only.

Because of the differing occupational compositions among industries, it is necessary to use several variations of the prelisted schedule discussed in section D, pages 14 and 15. This should be done so that each industry or group of industries will receive a relatively short schedule that contains only the occupations expected to be found in that industry. Important occupations in the area which may be expected to occur in all industries should be included on all schedules. Definitions of the occupations to be covered in the survey should be included with the schedules.

When information is to be obtained by a schedule with an "open end" (i.e., in addition to the listed occupations, the employer is asked to furnish data on other occupations which he feels are important in his establishment or for which he has noted shortages of workers); the instruction to the employer should provide definitions not only for the listed occupations, but also for broad occupational groups, such as professional, managerial, skilled, etc.,[1] depending upon the types of occupational groups included in the survey. The employer can then be asked to list additional plant titles within the broad occupational groups. The kind of occupations to be added in "open end" sections should be specified, e.g., other shortage jobs, hard-to-fill jobs, new and emerging occupations, etc. The added occupations will differ from firm to firm because of varying conditions, and will provide information for further investigation and for a more thorough evaluation of the manpower situation. However, the data collected in the "open end" portion of the schedule will not constitute a complete count of sampled occupational requirements and supply and therefore cannot be tabulated with the listed occupations. (See section C-4, page 9.)

In some instances, an employee schedule with no listing of occupations whatsoever ("unlisted" questionnaire) may be deemed more desirable than a prelisting of occupations. For this approach, the employer questionnaire would request a listing of every occupation for which workers are employed in reporting establishments. Definitions of broad occupational groups should be provided to employers in order to assist in the organization of the occupational listings. All job titles submitted should be checked by occupational analysts who will not only translate establishment job titles into DOT codes, but also verify that the job functions performed by workers in reporting establishments correspond with the job functions covered by the DOT codes designated.

1/ When the third edition of the Dictionary of Occupational Titles is in use, such definitions should conform to the broad occupational groups in the new Dictionary's structure.

Careful consideration of the following factors will aid materially in determining the need for an area skill survey and will be helpful in deciding what occupations should be selected. Occupations selected for study should be those that are of key importance to the area's economy. Where other factors might also be considered, those listed below should be useful in yielding a survey structure of greatest usefulness to the community.

1. Surplus and Shortage Occupations: These occupations may be determined by an analysis of local office openings and worker applications by three- or six-digit occupational groups over a given period of time. The findings should be verified by a check of ordertaking and of referral interviews. Shortage occupations are important because they present serious placement problems. Surplus occupations require study so that applicants classified in these occupations may be helped in finding alternative outlets for their skills and abilities. Previous training needs surveys or job vacancy information surveys in areas where they have been conducted, as well as a check of newspaper help-wanted advertisements, may provide additional leads to shortage occupations.

2. Significant Occupations: Occupations now important and which will continue to be so in the area may be selected on the basis of the area's industrial composition and of the skills essential to the major industries. There may be certain occupations in which many applicants express a continuing interest. A study of these occupations may verify local demand and thus provide more realistic counseling and interviewing information. Occupations of particular significance to national defense, as well as important entry occupations, may also be selected for a survey.

Significant occupations may be selected in accordance with their numerical importance in the area as determined from the distribution of workers by occupation in the Decennial Censuses. It may be expected that occupations which are numerically important will show relatively greater job market activity. Detailed occupation of the experienced civilian labor force by sex for States, metropolitan areas, and counties is available from Table 121, Volume PC(1)D, Characteristics of the Population, U.S. Census of Population, 1960. It should be recognized, however, that Census occupational groupings are not strictly comparable with Dictionary of Occupational Titles (DOT) groups. The following procedure can be used to convert the broad Census groupings into DOT groupings (1949 edition). 2/

2/ A conversion table of code and title changes between the second and third editions of the Dictionary of Occupational Titles will be published at the same time as the third edition of the DOT. Broad groupings similar to those described in this section may also then be used for grouping general occupational distributions in the area as shown in the Census.

The first six occupational groupings are in very close agreement, as between Census and DOT code content. These groupings are:

DOT Codes	
0-0 through 0-6	Professional, technical, and kindred
0-7 through 0-9	Proprietors, managers, and officials except farm
1-0 through 1-4	Clerical and kindred
1-5 through 1-9	Sales workers
2-0	Private household workers
2-2 through 2-9	Service workers, except private households

By grouping the two Census titles "Farmers and farm managers," and "Farm laborers and foremen," we have a new group comparable with the 3- group of the DOT. For more exact comparability, code 3-30--"Fruit and vegetable graders and packers"--could be pulled out of the 3- group and included with "Operatives and kindred workers," while 3-87--"Fishermen and oystermen"--could be put in with "Laborers, except farm and mine." It is doubtful if this is justified, however, since other variations in the two sets of data will offset the effect of this difference.

The DOT skilled, semiskilled, and unskilled groups, when combined, are comparable with a combination of three Census group titles, "Craftsmen, foremen, and kindred workers," "Operatives and kindred workers," and "Laborers, except farm and mine." Rough comparability at more useful levels of detail is possible, however, by allocating the three-digit DOT codes to the appropriate Census group title. The following lists will permit adapting the tallying of the survey so that the classes of skilled, semiskilled, and unskilled in the DOT system can be obtained at the same time as the three Census major groups. For this purpose, the method of tallying the skilled, semiskilled, and unskilled sections of the file is as follows:

Provide seven tally sheets labeled:

(1) Craftsmen and foremen--skilled
(2) Operatives and kindred--skilled
(3) Craftsmen and foremen--semiskilled
(4) Operatives and kindred--semiskilled
(5) Laborers, except farm and mine--semiskilled
(6) Operatives and kindred--unskilled
(7) Laborers, except farm and mine--unskilled

Sheets (1) and (2) will be used with the DOT 4's and 5's. When tallying, consider the following as craftsmen and foremen, sheet (1), and all others as operatives, sheet (2):

DOT	DOT	DOT	DOT
4-01	4-44 thru 4-49	4-83	5-23 thru 5-32
4-07	4-60	4-84	5-41
4-16	4-68	4-86	5-42
4-21	4-71	4-95	5-53
4-26	4-73	4-97	5-55
4-29	4-75	5-05	5-72
4-32	4-76	5-08	5-73
4-35	4-80	5-09	5-76 thru 5-83
4-38	4-81	5-12	5-88
		5-17	5-91 thru 5-99

Sheets (3), (4), and (5) will be used with the DOT 6's and 7's. When tallying, consider the list below as craftsmen and foremen, sheet (3); 6-30, 7-37, 7-47, and 7-85, as laborers, except farm and mine, sheet (5); and all others as operatives, sheet (4):

DOT	DOT	DOT	DOT
6-07	6-83	7-24	7-72
6-29	6-84	7-26	7-73
6-35	6-86	7-27	7-76
6-44	6-97	7-31	7-77
6-73	7-08	7-53	7-79
6-81	7-17	7-55	7-81
	7-23	7-59	7-83

Consider all DOT 8's as laborers, except farm and mine, and tally them on sheet (7). Consider the following DOT 9's as operatives, and all others as laborers, except farm and mine; tally them on sheets (6) and (7), respectively:

9-16	9-22	9-48	9-73
9-20	9-35	9-57	9-86
		9-71	9-87

3. Future Demand Occupations

Occupations for which there is relatively little current employment but for which there may be a sizable future demand may be determined from knowledge of expansion plans of existing industries, the nature of proposed new plants in the area, and technological changes affecting employment in specific occupations. (To obtain data on emerging occupations, see section C-5, pages 9 and 10.)

C. Information To Be Collected From Employers

1. Total current employment in the establishment.

2. Total employment requirements.
   (a) 2 years hence.
   (b) 5 years hence.

3. For each occupation selected for the survey.
   (a) Total current employment.
   (b) Required employment.
      (1) 2 years hence.
      (2) 5 years hence.

   Note: The employment figures to be entered in the expected employment columns (columns 4 and 5 of employer schedule, page 18) should be total employment in the occupations in the establishment, not merely the additions to be added to employment shown for the base period.

   (c) Number of workers expected to complete in-plant training programs.
      (1) In 2 years.
      (2) In 5 years.
   (d) Number of replacements in next (or past) 12 months. Replacements are workers who leave the labor force for reasons such as death, retirement, disability, or entry into the Armed Forces. Employers should enter such replacements expected to occur in the next 12 months or, if this is not feasible, those occurring in the past 12 months. This figure eventually will be multiplied by 2 and 5 to get estimated replacements in the occupation in 2 and 5 years.

4. An "open end" schedule may be used to permit the employer to record those occupations which he believes are significant and are not included in the survey. However, data resulting from this non-listed portion of the questionnaire must be kept separate from the tabulations of the prelisted occupations. This is because occupations in the "open end" portion of the schedule were not sampled in all firms which might have had these occupations in their establishments. Therefore, the data from the "open end" portion of the schedule cannot be inflated to the universe but may be used as supplementary material in the report's narrative portion.

5. In order to obtain additional information which can aid in the analysis of the data, a series of questions known as Part II of the schedule (pages 21 and 22) should be included with the schedule. In probing for expected changes in total employment during the forecast period, the following are examples of the type of information which might be collected from employers through this questionnaire:
   (a) Changes in sales volume, product development, modernization, or technological change.
      (1) Plant expansion or contraction planned during the forecast period.

(2) Expected shifts in industrial activity and/or production processes over the same period.
(3) Important technological (or scientific) trends which will influence the industry in the next few years and which may have a significant effect on the technical skills of the work force.

(b) Changes in types of occupation and their proportion of total employment.
(1) Changes in production processes which influence the proportion of professional and technical workers.
(2) Changes which influence the number of clerical and sales personnel.
(3) Changes which influence the number of skilled, semiskilled, or service workers.

(c) Kinds of occupational training the employer needs within and from outside his establishment.

(d) Other information.
(1) Hard-to-fill jobs.
(2) Educational requirements for hard-to-fill jobs.
(3) Types of formal company training regularly provided.
(4) Emerging occupations. (See page 22, 4d.)

D. Method of Collecting the Data

When the scope of the survey has been determined, sufficient newspaper publicity should be obtained to insure community awareness of the survey's importance. A sample publicity release is presented on the following page.

The publicity should be followed immediately by pre-survey letters to all employers covered by the survey. (See sample letter, page 12 and section E, pages 23-25, Selecting Employer Sample.) This pre-survey letter should be sent under the letterhead of the sponsoring organization (Area Manpower Council, Chamber of Commerce, Board of Trade, or other organized community groups on manpower problems.) The letter should outline briefly the purpose of the survey and solicit the cooperation and endorsement of the employer.

The pre-survey letter is an excellent form of publicity for the survey, for it tells the employers that the survey is being conducted and gives the names of local sponsors. In addition, it informs the employers of the survey schedule and questionnaire which they will receive either by mail or by personal visit very shortly after the pre-survey letter.

In some situations it may be necessary to prepare more than one type of pre-survey letter. Various types of letters which may be applicable are as follows:

1. A general letter which can be sent to most employers covered in the survey. The sample letter on page 12 is an example of this type which may be adapted to local use.

SAMPLE OF PUBLICITY RELEASE

FOR IMMEDIATE RELEASE
(Date)

The (name of the State agency), in cooperation with (names of persons or organizations), is initiating a cooperative study of (name of area) current and future manpower requirements. The results of this skill survey will be useful in planning the kinds of manpower, training, and community development programs which are most needed to bolster employment and reduce unemployment in the _____ labor area. For this reason, (name and title of State administrator) is urging all employers who are to be contacted during the course of the study to cooperate to the fullest extent possible.

The study is designed to provide comprehensive information on current employment, and requirements for _____ occupations over the next 2 and 5 years. The occupations to be studied represent the most important types of technical, semi-professional, and skilled manpower needed in (name of area).

By providing information on the supply and demand for these occupations on a long-term basis, the area skill survey can be extremely valuable to our educational authorities in planning their counseling and guidance programs as well as in formulating their future curricular and building programs. The information arising from the survey will also be of value to (area) employers in their recruitment and training programs and in formulating the future plans for their individual establishments. Finally, the survey information will be useful to (name of State agency) in initiating training programs for the occupations in short supply and in meeting more successfully employer requests for skilled and technical workers.

The (area) skill survey is being sponsored by the following persons representing many of the area's most important businesses and organizations: (name of persons and organizations they represent).

The survey involves a sample of approximately (number) firms, each of which will be asked to complete a questionnaire on the current and future requirements for the surveyed occupations found in their firm. The accuracy of the results of the study is dependent upon obtaining a high percentage of response from the firms which have been chosen to participate. Company officials are urged by (name of State administrator) to watch for these questionnaires, which will be arriving during the next few days, and to furnish the requested information as promptly as possible.

EXAMPLE OF PRE-SURVEY LETTER

(Name)	(Area) Manpower Council	(Name)
"	(Address)	"
"	(Date)	"

Dear Sir:

The (name) Area Manpower Council is lending its support to the (name of State agency) in the conduct of a Skill Survey for the _____ (name of area). This survey is designed to furnish long-range occupational manpower requirements of employers in (name of area) which will then be balanced against the supply of workers available from the schools and other sources so as to determine the adequacy of current training programs.

To carry out this study effectively, information must be obtained regarding the current and prospective needs of (name of area) employers in specified occupations. You are one of the employers in the area who have been selected to participate in the study and who will be contacted by mail or personal visit within a few days for the purpose of obtaining this essential information. When the survey forms arrive, would you please assign the responsibility for completing them to a person who is familiar with the current and long-range policies, plans, and prospects of your company? All information furnished us is confidential and will be used for statistical purposes only so that no individual firm can be identified.

The survey can be of vital importance to the industrial, professional, and business segments of the (name of area) and we shall appreciate your participation in the project. A copy of the completed study will be sent to you.

Sincerely yours,

Chairman

2. An out-of-area or out-of-State letter for use when the labor area crosses State lines or when the parent company for a local firm is located elsewhere and must be contacted concerning the survey.
3. A letter to be sent to the largest firms (which are to be personally visited) in order to arrange for a specific time when a management official of the firm will be available. A follow-up letter may be used with these firms to confirm the appointment. However, it usually is preferable to make such appointments by telephone after the introductory letter has been sent.
4. A letter to firms in certain industries, such as railroads, which have unusual occupational structures, requesting preliminary discussions concerning the applicability of occupations in the industry to the general survey.

The information needed from employers may be obtained by mail or by personal visit. Because of their importance in the area and to the findings of the survey, personal visits should be made to the major establishments in the sample. The purpose of the visit is not to collect the information but to explain the objectives of the survey, to familiarize the employer with the measurement concepts, and through this personalized approach, to increase the chances that the schedule will be returned.

The following minimum standard has been set for determining the number of firms which are to receive a personal visit. Sufficient firms must be personally visited in order to account for no less than the indicated percentage of estimated total wage and salary employment for each of the industry divisions listed below:

Industry Division	Percent of Total Employment in Specified Industry Division
Mining	25
Construction	10
Manufacturing	30
Transportation, Communications, and Public Utilities	25
Trade	10
Finance, Insurance, and Real Estate	10
Service (except domestics in private households)	10
Government	25

The number of firms contacted by personal visit plus those contacted by mail is equal to the total size of the employer sample which is described in Section E, pages 23-25.

It is very important that the proper official(s) be contacted with respect to obtaining the necessary information for the survey. In many cases,

this person will be a member of the firm's management since it is only at this level that the future plans of the firm are known. The personnel office, normally contacted during the regular employer visiting program, is not likely to be the appropriate place for obtaining the occupational information needed for purposes of an area skill survey. However, there is no implication that the contact should be confined to a single source. If possible, contacts should be made with management, the personnel office, foremen, and other suitable sources.

With respect to surveyed occupations which are highly unionized (e.g., in the construction industry), it also may be desirable to contact the union(s) involved to collect supplementary information concerning union membership, apprenticeship and other training programs, enrollment and output, estimates of non-union workers in the area, etc. This information may be useful in supplementing the data furnished by surveyed establishments in these industries.

When mail solicitation is used, the schedule should be accompanied by a letter indicating (a) the purpose of the survey; (b) the information needed on the schedule; (c) the importance of the data in providing sufficient workers to meet employer demands; (d) that individual establishment data will be treated confidentially; (e) a submittal date; (f) that the employer's cooperation is essential to the success of the study; and (g) the name and telephone number of the appropriate person in the local office who should be contacted if the employer has any questions. A prepaid return envelope should be included to facilitate return of the completed schedule. As is true with the personal visits, care must be taken to insure that the skill survey schedule reaches those officials of the firm who are able to furnish the most valid employment data.

Many of the occupations surveyed will be found in only certain industries or groups of industries. Therefore, separate schedules comprised only of those occupations common to the particular industry should be prepared. Those occupations found in all industries (e.g., clerical occupations) should be included on all schedules. By preparing schedules for each industry or industry group, a shorter list of occupations will be sent to the sample firms and there will be relatively few occupations which will not apply to the individual establishments.

It is suggested that a worksheet, such as is illustrated below, be prepared. It lists the surveyed occupations and the industries of the area in which they are commonly found so as to determine more easily the number and content of the schedules involved in the survey. A separate schedule will then be sent to each industry (or industry group), containing only those occupations common to the industry.

Worksheet A: Industrial Distribution of Survey Occupations

Standard Industrial Classification Code	Industry	Baker, 4-01.00	Carpenter, 5-25.010	Draftsman, 0-48	Auto Mechanic, 5-81.010	Machinist, 4-75.010	Typist, 1-37.32	Welder, Arc, 4-85.020	Etc.
15-17	Contract Construction		x	x			x		
19, 21, 29-31, 39	General Manufacturing			x		x	x	x	
20	Food & Kindred Products	x					x		
32	Stone, Clay & Glass						x		
38	Instruments			x			x	x	
22-23	Textiles & Apparel						x		
33-36	Metals			x		x	x	x	
50, 52-57, 59	Trade	x			x		x	x	
80	Medical & Health Services						x		
75	Automobile Repair Shops				x		x	x	
76	Miscellaneous Repair Services		x				x	x	
etc.									

Subsequent letters, telephone calls, and personal visits should be used for follow-up of employers who do not return the survey schedule.

Nonresponse Follow-up Procedures

1. All surveyed establishments which have not responded within 2 weeks of the requested date should be contacted by mail. This should consist of a follow-up letter reminding them of the importance of the skill survey and emphasizing the need for their cooperation if valid results are to be obtained. The follow-up letter should be accompanied by a duplicate copy of the schedule in the event the original was misplaced.

2. If there is no response within 2 weeks after the first follow-up, a personal visit should be made to all nonresponding establishments in Group I (as defined in section E-2, page 24) and a telephone contact made to all nonrespondents in Groups II and III.

3. Those establishments which have not responded within 5 weeks after the requested date should be considered "nonrespondents" in tabulating and analyzing the data.

Where possible, the schedule and questionnaire developed for use in the survey should be pre-tested with a few establishments. The pre-test is useful for correcting questions which may cause response errors.

A sample schedule for the collection of survey data is presented on page 18. If an "open end" or "unlisted" questionnaire is used, an appropriate instruction to the employer must be included under section C of the Instructions for Preparing the Schedule for Area Skill Survey. (See section II, B, page 5.)

Instructions for Partial Response

When schedules returned by employers are only partially completed, the employers should be contacted by telephone and requested to supply the missing information. This is particularly important with respect to Part I of the schedule since the data on this portion will be inflated to universe totals. If the employers are unable or unwilling to furnish the requested information, the schedules should be adjusted as follows:

Section A: Number of employees on all payrolls for the pay period including the 12th of ___(month)___: If this information cannot be obtained from the employer for this survey, use the most recent data available, as obtained from the Bureau of Labor Statistics 790, DL 1219, ES-202, ES-211 local office records, etc.

Section B: Number of employees expected in 2 years and 5 years:
If a current employment level is available for the establishment but no employment forecasts are provided by the employer, the current level of employment for the establishment should be entered for the 2- and 5-year forecasts. If a forecast is made for 2 years hence but not for 5 years hence, use the 2-year forecast for both periods. If a forecast is made for 5 years hence but not for 2 years, use two-fifths of the 5-year forecast change (i.e., change from current or base employment figure to that for 5 years hence) for the 2 year period.

Section C: Occupational data in columns 3 through 8 of the schedule:

Column (3) - Current Employment
If it is not possible to obtain current employment for the occupation, all entries for this occupation for the establishment should be omitted from the tabulation of data.

Columns (4) and (5) - Expected Employment in 2 and 5 Years
If current employment in an occupation is reported but no forecasts are made by the employer, the current employment in the occupation should be carried forward for both periods. If a forecast is made for 2 years hence but not for 5 years, use the 2-year forecast for both periods. If the employer provides a forecast for 5 years hence but not for 2 years hence, use two-fifths of the 5 year forecast change for the 2-year hence period.

Column (6) - Number of Workers Needed for Replacement Next Year, and

Column (7) and (8) - Workers Completing Company Training Programs or Promoted Into Occupation in 2 and 5 Years
If current employment in an occupation is reported, but no employer forecasts can be obtained for these three columns, no attempt should be made to provide an estimate. Therefore, "no entry" by the employer in these columns will be treated as zeros when summarizing the data.

Schedule for (Name) Area Skill Survey, Part I

Budget Bureau No. 44-R1285
Expiration date: 12/31/66

Employer Name _____
Address _____
_____ (Zip Code)
SIC ____ EI _____ Sampling Group _____

(This box to be filled in by State agency. Please change name or address if incorrect.)

State Agency Name, Address, and Zip Code

Information reported on this form is strictly confidential and will not be revealed to any unauthorized person nor published in such a manner that data relating to individual companies can be identified.

BEFORE ENTERING THE REQUESTED INFORMATION, PLEASE READ THE INSTRUCTIONS ATTACHED TO THIS SCHEDULE

A. Number of employees on all payrolls for the pay period including the 12th of (month), 19__: _____
B. Number of employees you expect to have - 2 years hence (use date): _____
- 5 years hence (use date): _____
C. Please furnish below the data requested for each occupation in columns (3) through (8)

DOT Code	Occupation	Current Employment	Expected Employment in:*		No. of Workers Needed for Replacement Next Year 1/	Workers Completing Company Training Programs or Promoted into Occupation in: *2/	
			2 Years	5 Years		2 Years	5 Years
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PROFESSIONAL						
0-48	Draftsman						
0-50	Laboratory Technician						
0-56	Photographer						
	CLERICAL						
1-01	Bookkeeper						
1-37	Typist						
1-36	Statistical Clerk						
1-25	Office Machine Operator						
	ETC.						

Signature _____ Title _____ Date _____
(Firm representative responsible for this report)

* State agencies should put actual dates in columns 4, 5, 7, and 8 covering 2 and 5 years hence.

1/ Replacement needs are workers needed to replace those who are promoted to another occupation and those who leave the labor force for reasons such as death, retirement, disability, or entry into the Armed Forces. Please enter in this column the number of such replacements which you expect will occur in the next 12 months. If this is not feasible, enter figure for those replacements occurring in the past 12 months. Do not include workers who leave to seek or accept other jobs, or workers separated from your establishment because of reduction in force, inadequate performance on the job, or misconduct.

2/ Combine the number of workers expected to complete company training programs and the number of workers expected to be promoted into the occupation from other jobs in the company in the next 2 and 5 years and enter in the appropriate columns.

HANDBOOK ON EMPLOYMENT SECURITY JOB MARKET RESEARCH METHODS--AREA SKILL SURVEY

Note to State Agency:
These instructions should be attached to the employer schedule

INSTRUCTIONS FOR PREPARING PART I OF THE SCHEDULE FOR AREA SKILL SURVEY

For the purpose of this survey, please assume the following conditions when furnishing the requested information.

1. Qualified workers will be available to meet any anticipated employment needs.

2. The present long-term trend of economic growth of the United States will continue with no major setbacks for the next few years.

3. Scientific and technological advances will continue, affecting industrial production methods, manpower requirements, and consumption patterns.

4. The present-day normal workweek at your firm will continue through the forecast period.

5. Your current plans for plant expansion or modernization will materialize according to schedule.

SECTION A. Number of employees on all payrolls for the period including the 12th of (month). Enter the total number of workers of all kinds on all payrolls in this plant, facility, or establishment, covering the pay period including the 12th of the month indicated.

SECTION B. Number of employees you expect to have. Enter here the total number of workers you expect to employ in this plant, facility, or establishment 2 and 5 years hence. Please refer to the assumptions above in making your estimates.

SECTION C. Occupations. The occupations listed are those which have been identified as of major importance at present in (area). The listing may not include all of the occupations in your establishment and may include occupations which you do not use or plan to use in the future. Some of the occupations in your company may be included here under a title different from that used in your firm. Please study the list and definitions carefully before making any entries. If there are occupations in your plant not shown in the listing which you expect will have major growth or decline, please enter them in lines provided at the end of each occupational category. (State agency, please note: If "open-end" or "unlisted" questionnaire is used, modify preceding paragraph accordingly.)

Column (3) Current Employment. Enter in column 3 the number of workers (excluding trainees) you now employ in each occupation listed. If you have no employees in one or more of the listed occupations, enter "none" in column 3.

Columns (4) and (5), Required Employment in 2 and 5 Years. For each occupation, enter your estimates of the total number of workers you will require 2 and 5 years from now. Please refer to the assumptions at the beginning of these instructions in preparing your estimates of future employment. The estimates should not include workers needed as replacements of prospective losses due to normal turnover or to attrition (retirements, withdrawals for military service, quits, deaths, etc.). Illustration: If you employ 10 workers in the occupation now and expect to employ 14 workers in the occupation 2 years hence, enter 14 in column 4.

Column (6) Number of Workers Needed for Replacements Next Year. Replacement needs are workers needed to replace those who leave the labor force for reasons such as death, retirement, disability, or entry into the Armed Forces. Therefore, for each occupation, please enter the number of workers needed during the next year to replace those workers who will leave the occupation because of promotion, retirement, death, disability, withdrawal for military service, etc.

In the event that the coming year will not be typical for your firm in this respect, or that you are unable to make a judgment for the coming year, please indicate the extent of replacement needs which occurred during the past 12 months, or those which you judge as "average" for a 12-month period for each occupation.

Columns (7) and (8) Number of Workers Completing Company Training Programs or Promoted into the Occupation in 2 and 5 Years. Enter in the appropriate columns the number of workers expected to complete plant training programs conducted by your establishment for each occupation in the next 2 and 5 years, plus the number of workers in your employ which you expect to promote into that occupation from other jobs in the company in the next 2 and 5 years.

If you have any questions about the completion of this schedule, please phone ____(name)____ at ___(phone)___. Please return the completed schedule by _(date)_ to the _(name of agency)_. _____(address)_____. A return stamped envelope is enclosed for your convenience.

Schedule for (Name) Area Skill Survey

Part II

In addition to the information you have provided on Part I of the survey schedule, you are requested to supply the following information which will be helpful in analyzing the future occupational needs of the (name) area.

1. If you indicated changes on the schedule in total employment or in any of the occupations listed which might be considered significant in view of the amount of change for the occupation involved (item B and columns 4 and 5 on the schedule), please discuss in the space below the reasons for such changes, e.g., plant expansion, contraction, modernization, new orders, new products, important technological (or scientific) trends, which may have a significant effect on the technical skills of the workforce, etc.

_____

_____

_____

_____

(Please use reverse side if additional space needed)

2. If you indicated changes in types of occupations and the proportion these occupations are of total employment, please discuss below how changes in production processes will influence the proportion of (a) professional and technical workers; (b) clerical and sales workers; and (c) skilled, semi-skilled, and service workers.

_____

_____

_____

_____

(Please use reverse side if additional space needed)

3. Please list below the occupations for which your experience indicates training is most needed to provide better qualified workers:

In your establishment (On-the-job training including apprenticeship)	Outside your establishment (Vocational and other schools)
_____	_____
_____	_____
_____	_____
_____	_____

4. Other information. (Use reverse side if additional space needed).

a. For what occupations have you experienced difficulty in hiring qualified workers, what are the reasons for such difficulties, and to what extent was it necessary to recruit workers from outside the area for the surveyed occupations?

_____

_____

_____

_____

b. What are the minimum educational requirements for the hard-to-fill occupations shown in (a) above?

_____

_____

_____

_____

c. What type of formal company training is regularly provided for these hard-to-fill occupations (as distinct from training you feel would be desirable in your establishment)?

_____

_____

_____

_____

d. What occupations that are new to your establishment or the area are emerging due to changes in processes, automation, or technological developments? Current employment in such occupations may be insignificant, or even nonexistent, but the growth potential is important.

_____

_____

_____

_____

_____

E. Selecting the Employer Sample

1. Introduction

The information for the survey should be collected from a representative sample of firms in the area which can be expected to employ workers in the occupations being surveyed. After the occupations to be studied have been selected (Section II-B, page 6), determine the industries in which these occupations usually are found. This may be obtained from the 1960 U.S. Census, Occupations by Industry, Special Report PC(2)-7C and Volume II of the second edition of the Dictionary of Occupational Titles, pages 507-739. 3/

The most efficient sample for this type of study is stratified by establishment size. It should include all large establishments and a sampling of the smaller ones in the appropriate industries. The size of the sample to be selected for each area in the survey will be determined by the work force in the labor area. The establishments selected will be weighted to represent the universe of firms in the area.

The latest available ES-202 listing of Unemployment Insurance covered units supplemented and merged with known noncovered establishments in nonagricultural industries employing 100 or more workers will be the frame from which the sample establishments will be selected. Noncovered establishments with fewer than 100 employees may be included on the original listing from which the sample is drawn to insure adequate representation in some industries. The noncovered establishments added will have an equal opportunity for inclusion in the sample.

2. Selecting the Sample

a. Array all establishments in the universe (UI covered and noncovered) in descending order of employment for the base month.

b. For the array in item a, secure a cumulative employment total.

c. From the grand total obtained in item b, determine the midpoint of the total employment. The larger establishments which represent the upper 50 percent of employment constitute the first and second quartiles.

3/ A similar listing will appear in Volume II of the third edition of the Dictionary of Occupational Titles.

d. Determine the mid-point of employment in the lower 50 percent of employment as the point between the third and fourth quartiles.

e. Based on the quartiles obtained in items c and d, the establishments will be assigned to three employment groups in the following manner:

Group I

(1) All establishments which comprise the upper 50 percent of employment should be included in this group.

(2) Any establishments which are considered atypical should be included in Group I, even though they fall in the third or fourth quartile of the array. This will reduce the possibility that these atypical firms may distort the data during the inflation process, since, unlike Groups II and III, there is no inflation of Group I data (except to estimate non-respondents) because it is basically a 100 percent sample.

Group II (firms in the third quartile of the array)

(1) In order to improve the sample mix by industry, arrange the establishments in the third quartile of the array by two-digit industry, and within each industry by employment size in descending order. Do not include any atypical firms which were transferred to Group I.

(2) Sample ratio = 1/5 or 20 percent.

(3) Starting with a random number less than 5, select every 5th establishment for inclusion in the sample.

Group III (firms in the fourth quartile of the array)

(1) In order to improve the sample mix by industry, arrange the establishments in the fourth quartile of the array by two-digit industry group, and within each industry by employment size in descending order. Do not include any atypical firms which were transferred to Group I.

(2) Sample ratio = 1/25 or 4 percent.

(3) Starting with a random number less than 25, select every 25th establishment in each two-digit industry for inclusion in the sample.

f. Separate listings should be prepared of the establishments in Groups I, II, and III. A notation should be made on each employer schedule (box in the upper left-hand corner) indicating the group from which the sample establishment was drawn.

F. Tabulating the Survey Data From Employers

1. Worksheet formats:

a) The worksheets illustrated on the following pages are to be used in summarizing the results of the survey and for obtaining the relationships needed to analyze the data.

b) Worksheet B illustrates a method for developing the inflation factors needed for each industry category in order to adjust current and anticipated sample employment data to the universe.

c) Worksheet C summarizes the data by occupation for each industry category reported by sample firms, and data inflated to the universe, on current employment, future requirements, and training.

d) Worksheet D summarizes the detail included in Worksheet C, and shows by occupation and industry total current employment, required employment, replacement needs, and trainee output.

e) In summarizing the reported data for Worksheets B and C, the data for each firm should be tabulated in the same sample group in which the firm was originally selected, even though the employment reported on the survey schedule falls in a different group.

2. Sample inflation procedure

All establishments in Group I are included in the sample. Consequently, the data reported would not need to be inflated if all establishments in this group returned their questionnaires. Since it is unlikely that 100 percent response will be attained, the inflation procedure includes provision for non-response. In addition to accounting for non-response, the procedure provides for "weighting up" results from Group II and III establishments. Finally, all sample data are adjusted to reflect current employment for the survey month. The mechanics involved in carrying out the inflation or estimating procedure are indicated below.

Inflation of Sample Employment to Area Totals

Sort employer schedules into the two-digit SIC industry categories selected for the survey. Schedules may be sorted into major SIC industry categories when a more detailed industry breakout is not desired.

Worksheet B: Inflation Factors for Industry Categories
(Data hypothetical)

Labor Area _____ Industry Category _____

Sample Group	Current Survey Period Employment from ES-219 (Total only)	Base Period Employment (March 196_) Group universe	Base Period Employment (March 196_) Responding Establishments	Unadjusted Inflation Factor (2) ÷ (3)	Current Survey Period Employment Responding Establishments	Unadjusted Inflated Current Employment (4) x (5)	Adjustment Ratio (1) ÷ (6) (Total only)	Adjusted Inflation Factor (4) x (7)
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Group I	XX	14,088	13,400	1.0513	14,860	15,622	XX	1.0671
Group II	XX	2,384	890	2.6787	980	2,625	XX	2.7189
Group III	XX	3,810	95	40.1053	110	4,412	XX	40.7069
TOTAL	23,000	20,282	XX	XX	XX	22,659	1.0150	XX

Note: March is chosen as the base period employment month since industry data tabulated from the ES-202 is most detailed for that month. Use latest year available.

XX - Not applicable.

Worksheet B, "Inflation Factors for Industry Categories," provides a method for developing inflation factors needed for each industry category. The following steps (each identified as a column on worksheet B) are to be followed to obtain these factors. A separate worksheet B must be prepared for each industry category.

Step 1: From ES-219 or Current Employment Statistics program, obtain total area employment for each industry category for the survey (reference) month.

Step 2: Enter total base-period employment (from the ES-202 listing supplemented by non-covered firms) separately for each universe Group I, Group II, and Group III.

Step 3: Add base period employment for all returned schedules for each sample group (Groups I, II, and III) by industry, and enter the base-period employment of all responding establishments thus derived in column 3.

Step 4: Obtain the unadjusted inflation factor for each group by dividing the universe employment in the base period in the group (step 2) by the corresponding employment of the responding establishments for the same month (step 3). Each group, in each industry category, will have its own unadjusted inflation factor.

Step 5: Sum the survey month employment for the responding firms in each group by industry and post in this column.

Step 6: For each group separately, multiply the figures shown in steps 4 and 5 to obtain the unadjusted inflated survey month employment for each group. Enter the sum of the three groups on the total line.

Step 7: Divide the area's total employment for the survey month for the industry category (step 1) by the total unadjusted inflated survey month employment of responding establishments (step 6) to obtain an adjustment ratio.

Step 8: Multiply each group's unadjusted inflation factor separately (step 4) by the adjustment ratio (step 7) to obtain an adjusted inflation factor for the group.

All sample data in the industry are to be inflated by the adjusted inflation factor for each group. (See worksheet C for application.)

Worksheet C: Worksheet for Compiling Estimates by Occupation of Current Employment, Employment Requirements, Trainees and In-Plant Promotions

Labor Area _____ Industry Category _____

Item	Group I Inflation factor: ____*		Group II Inflation factor: ____*		Group III Inflation factor: ____*		Estimated summary totals (cols. 3 + 5 + 7)
	Number in sample	Inflated number	Number in sample	Inflated number	Number in sample	Inflated number	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Draftsman 0-48							
Current Employment							
Expected Employment							
2 Years Hence							
5 Years Hence							
Replacement Needs							
2 Years Hence							
5 Years Hence							
Trainee Output							
2 Years Hence							
5 Years Hence							
Carpenter 5-25.110							
Current Employment							
Expected Employment							
2 Years Hence							
5 Years Hence							
Replacement Needs							
2 Years Hence							
5 Years Hence							
Trainee Output							
2 Years Hence							
5 Years Hence							
Automobile Mechanic 5-81.010							
Etc.							

*Enter adjusted inflation factor from step 8 of Worksheet B.

3. Inflation of Sample Data by Industry and Occupation

Worksheet C indicates a method for the inflation of total sample occupational data to area estimates. A separate worksheet should be prepared for each industry category.

Step 1: List in column 1 (by DOT code and title) each occupation surveyed in the industry group. For each occupation, the following items should be included:

a) Current occupational employment
b) Expected employment
   1) 2 years hence
   2) 5 years hence
c) Replacement needs: Replacement needs furnished by employers represent estimates for the next 12-month period or the experience of the preceding 12-month period. To compute replacement needs for 2 and 5 years hence, multiply the figures supplied by employers by 2 and 5, respectively.
   1) 2 years hence
   2) 5 years hence
d) Trainee output and in-plant promotion
   1) 2 years hence
   2) 5 years hence

Step 2: Enter in the Group I, II, and III column headings, in the space provided, the adjusted inflation factor for the respective groups in the industry category (from step 8 of worksheet B).

Step 3: The total sample occupational data should be posted in the appropriate columns (2, 4, and 6) for the industry category.

Step 4: For each occupation listed, mulitply the data posted in column 2 by the adjusted inflation factor for Group I and enter the results in column 3; multiply the data in column 4 by the Group II inflation factor and enter results in column 5; multiply the data in column 6 by the Group III inflation factor and enter the results in column 7.

Step 5: For each occupation listed, enter in column 8 the sum of the inflated data from columns 3, 5, and 7.

4. Instructions for Completing Worksheet D

Worksheet D provides a means for obtaining area occupational totals from worksheet C prepared for each industry category. Worksheet D may also be used to total the two-digit industries into major industry categories.

Worksheet D: Summary of Worksheet C:
Current and Expected Employment, Training Output and In-plant Promotion, by Industry and Occupation

Item	Total All Industries	Construction	Textiles	Apparel	Wholesale Trade	Etc.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Draftsman 0-48						
Current Employment						
Expected Employment						
2 Years Hence						
5 Years Hence						
Replacement Needs						
2 Years Hence						
5 Years Hence						
Trainee Output						
In 2 Years						
In 5 Years						
Automobile Mechanic 5-81.010						
Current Employment						
Expected Employment						
2 Years Hence						
5 Years Hence						
Replacement Needs						
2 Years Hence						
5 Years Hence						
Trainee Output						
In 2 Years						
In 5 Years						
Etc.						

The information required for industry columns 3, 4, 5, 6, 7, etc., for each item listed in column 1 is obtained from column 8 of worksheet C prepared for each industry category. Area totals (column 2) are the summations of industry data from columns 3, 4, 5, 6, 7, etc.

G. Estimating Trained Labor Supply Available at Later Periods

To estimate the supply of trained manpower available for the surveyed occupations by the end of a given period, it is necessary to estimate the number of entrants into these occupations during the period. The number of in-plant trainees expected to complete training in 2 and 5 years, and the number of in-plant promotions, included on Worksheet D (page 30), provides the base for this estimate. These figures must be supplemented, however, to include additional entrants into these occupations from sources outside the in-plant programs. This measure can best be arrived at by gathering from local school authorities, State and local apprenticeship councils, and trade unions, their estimates of persons expected to complete training for the relevant occupations by the end of the period. In addition, those currently unemployed in specific occupations should be included.

1. Estimating new entrants

Since there are generally a limited number of sources of labor supply which must be contacted for a given labor area, the necessary data usually should be obtained through personal visit rather than by mail. Each source of labor supply, such as the public schools, vocational schools, private and parochial schools, business schools, MDTA and ARA training projects, apprenticeship organizations, trade unions, etc., should be contacted by mail or phone before the visit is made, outlining the purposes of the study, the importance of their cooperation, and making an appointment for discussing the necessary data desired.

A schedule should be used to facilitate obtaining and recording the data. The schedule illustrated on page 32 can be used for collecting supply data from area schools and, with minor modifications, from trade unions and apprenticeship organizations. Each different type of supply source contacted should be given a different schedule, listing only those surveyed occupations trained by the particular institution. Definitions of job duties should be included for all occupations on the schedule to be sure that the supply data obtained from the training organizations relate to the same occupations as the demand data from employers.

In some cases, the supply data requested will not be available on the first visit. It will therefore be necessary, after explaining the nature of the information desired, to leave the schedule to be picked up at some later date.

(Name) Area Skill Survey

Occupational Supply Questionnaire

Based on your experience in the past year, please indicate the number of graduates in the succeeding five years who will be qualified to enter the labor force in each occupation. Attached to this questionnaire are definitions of the job duties for each occupation.

Name of Occupation	Length of Training Course (weeks)	Number of Graduates During Next 5 Years				
		First Year (use date)	Second Year (use date)	Third Year (use date)	Fourth Year (use date)	Fifth Year (use date)
Medical Technician						
Registered Nurse						

Name of School_____Date_____

Name of Person Contacted_____Interviewer_____

Care should be exercised in this procedure, through an examination of whatever sources are available, to avoid double counting of trainees. For example, an individual may be included by an apprenticeship group as a trainee for a specific occupation and, at the same time, may be included in an evening school count where he was taking related courses.

Overstatement might also result from failure to take into account the expected dropouts from schools and other training agencies. A certain amount of attrition may be assumed within the ranks of any group of beginners in training programs. Therefore, in computing available trainee data from class enrollments or expected enrollments, allowance, based on past experience, should be made for these losses.

Overstatement of future labor supply also may result from counting graduates of vocational or technical schools as available skilled workers when, in reality, such workers must undergo additional training to qualify as skilled workers. The extent of this additional training varies with occupation and area. Care should be taken to include school graduates as a supply at the occupational skill level at which they would be qualified.

Labor supply also may be overstated as a result of not taking account properly of workers who may leave the labor area. In areas which are large training supply centers (those containing community colleges, large technical schools, etc.) it would not be appropriate to add to the prospective supply all members of the graduating class. Many technicians, for example, would be expected to leave the area. Although difficult to ascertain, adjustments for out-migration of semi-professional or skilled workers should be attempted whenever this pattern occurs. Turnover confined solely within the area is not to be counted as additions to either supply or demand.

2. Estimating available qualified worker supply

The best source of information on the occupational characteristics of available qualified workers usually will be the local office active file of unemployed workers. The basic method for determining available qualified worker supply is to make an active file count of qualified applicants who meet normal employer hiring specifications for each of the surveyed occupations.

In determining qualified worker supply, individual ES-511 applicant cards on file in the local office should be screened carefully by competent placement personnel to ascertain whether qualifications of registrants are consistent with the performance requirements for the occupation.

Two classes of information on the ES-511 about an applicant represent the major sources of evidence about his qualifications for employment in a specific occupation. The first, work experience (item 15-39, et seq., ES-511), allows evaluation of an applicant's qualifications in terms of content, duration, and recency of the specific, or closely related, job. Education and training data (item 14 ES-511) also should be evaluated for duration, content, and recency. When such information is available, it is important that an objective evaluation of the applicant's personal characteristics be made. Knowledge of personal characteristics such as emotional instability, physical status, and other personal traits that would adversely affect the individual applicant's skill and ability for job performance is extremely useful. This information always should be related to the other, more specific evidences of an individual applicant's occupational qualifications to help determine whether the applicant should be counted as a part of the available qualified worker supply.

Worksheet E (page 35) and its accompanying instructions (pages 36 and 37) have been found to be helpful in tabulating by occupation the applicants on file in the local office in order to arrive at an estimate of the available qualified worker supply.

Data for individual applicants should be entered on each line by primary or secondary DOT code for those occupations surveyed, with check marks (x) in the appropriate cells. By accumulating the checks horizontally, it will be possible to evaluate the characteristics of the job applicants and make a determination with respect to the number fully and partially qualified in each occupation.

H. Summarizing the Data

Tables 1, 2, and 3 (pages 38-40) illustrate methods for summarizing the data obtained by use of the procedures described in sections A through G. These summary tables are designed to (1) facilitate analysis of the data; and (2) present the data in a form which can be adapted for publication.

The data in these tables should be rounded to eliminate the appearance of precise numbers. If rounded figures are not forced to add to the totals shown in any table, a footnote should be provided to indicate that the differences, if any, are due to rounding.

The agency should establish a minimum criterion for the publication of the survey data, i.e., a figure smaller than a certain prescribed level would not be published but would be combined with the data from some other group(s) in order to meet the criterion for publication.

Worksheet E: Applicant File Survey

Occupational Code	Fully Qualified Supply			Partially Qualified Supply													
	TOTAL	Temporary Layoff Expects Recall	Unemployed No Problem	TOTAL	Limited Availability	Not Fully Qualified in Occupation	Limited Education	No Experience	Too Young	Too Old	Physical Handicap	Mental Handicap	Language Barrier	Appearance, Habits, Reputation, etc.	Poor Work History	Police Record	Other

Worksheet E: Applicant File Survey
Explanation of Columnar Headings

Fully Qualified Supply:

Temporary Layoff - Expects Recall - includes those persons who, although presently unemployed, can reasonably be expected to return to their former employer. This situation can be determined on the basis of the applicant's work history and/or the interviewer's knowledge of the current job market situation.

Unemployed - No Problem - includes those persons who have just become unemployed, and other unemployed such as recent in-migrants or recent entrants or re-entrants to the labor force who have no special problem hindering re-employment, but have not as yet had time to be referred to or apply for new employment.

Partially Qualified Supply:

Limited Availability - includes those persons who are difficult to place because of self-imposed restrictions regarding such factors as hours willing to work, distances willing to travel and type of establishments in which they would work. This heading also would include those persons whose availability is limited by babysitter problems and those who are available only for work paying a specified minimum wage, which is above that normally prevailing in the area.

Not Fully Qualified in Occupation - includes those persons who because of technological changes, absence from the job market, etc., have become "skill rusty" or are not familiar with new procedures within their occupation.

No Experience - includes those persons who are fully trained and have the ability but lack only experience in their occupation, e.g., a female high school graduate with 2 or 3 years' typing and shorthand training, tested proficiency and ability, good appearance, etc., interest in stenographic work, but no experience.

Limited Education - includes those persons whose educational attainment is below the level required by employers who might ordinarily employ them.

Too Young - persons who cannot meet legal or established minimum age requirements.

Too Old - persons who, because of advanced age, cannot obtain employer acceptance.

Physical Handicap - persons whose physical limitations affect their employability.

Mental Handicap - includes those persons whose mental limitations affect their employability. (N.B. Lack of education per se is not a mental handicap.)

Language Barrier - includes those persons whose inability to understand or speak the English language hinders their employment prospects.

Appearance, Habits, Reputation, etc. - includes those persons who because of socially unacceptable appearance, habits, or other personal characteristics are not acceptable by employers.

Poor Work History - persons who have been unable to retain or establish a record of permanent employment due to frequently quitting jobs or being fired by employers.

Police Record - includes those persons who are unable to gain employer acceptance because of their record of criminal offenses.

Other - persons whose barriers to employment are unique or special situations not covered in the provided categories, e.g., unfulfilled military obligation.

Table 1

Current Employment and 2- and 5-Year Requirements in Surveyed Occupations

DOT Code No.	Occupation	Current total employment	Expansion needs in:		Replacement needs in:		Total additional requirements in:	
			2 Years	5 Years	2 Years	5 Years	2 Years	5 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Instructions for Completing Table 1

Table 1 summarizes 2- and 5-year expansion and replacement needs for each occupation in the survey.

Column 1, Occupation: List by DOT code number and title, each occupation in the survey.

Column 2, Current total employment: Enter for each occupation, the employment total for that occupation from column 2, Worksheet D (page 30).

Columns 3 and 4, Expansion needs: Subtract the current total employment for each occupation from the 2- and 5-year required employment for that occupation in column 2, Worksheet D, and enter the difference in the appropriate column.

Columns 5 and 6, Replacement needs: Enter in these columns the 2- and 5-year replacement needs for each occupation from column 2 of Worksheet D.

Column 7, Total additional requirements in 2 years: Enter the sum of entries in columns 3 and 5 for each occupation.

Column 8, Total additional requirements in 5 years: Enter the sum of entries in columns 4 and 6 for each occupation.

Note: A separate table may be prepared for each surveyed industry group. However, for any industry group in which there are less than three firms, or for which one firm represents 80 percent or more of the employment total for the industry group, the data should be combined with another industry group, prior to publication, in order to insure against disclosure of confidential information which could identify a specific firm.

Table 2

Added Labor Supply Locally Available 2- and 5-years Hence for Surveyed Occupations

DOT code No.	Occupation	Trainee output and in-plant promotions in:		School output in:		Union and apprenticeship output in:		Total labor supply available in:	
		2 Years	5 Years	2 Years	5 Years	2 Years	5 Years	2 Years	5 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Instructions for Completing Table 2

Table 2 is provided for use in summarizing estimates of the additional labor supply likely to become available 2 and 5 years hence for each occupation in the survey.

Column 1, Occupation: List by DOT code number and title, each occupation in the survey.

Columns 2 and 3, Trainee output and in-plant promotions: Enter the 2- and 5-year trainee output from column 2, Worksheet D, for each occupation.

Columns 4 and 5, School output: Enter the best available estimates of the number of persons who will have completed trade or technical school training for each of the listed occupations by the end of 2- and 5-year periods. This estimate may be arrived at by summarizing the information obtained on the Occupational Supply Questionnaire sent to the various schools in the area (see page 32).

Columns 6 and 7, Union and apprenticeship output: Enter the estimates of persons who will be trained by the unions and apprenticeship organizations by the end of 2- and 5-year periods. Care should be taken not to include persons who may already be included in columns 2, 3, 4, and 5.

Column 8, Total labor supply available in 2 years: Enter the sum of the data in columns 2, 4, and 6 for each occupation.

Column 9, Total labor supply available in 5 years: Enter the sum of the data in columns 3, 5, and 7 for each occupation.

Table 3

2- and 5-Year Occupational Needs and Estimated Labor Supply Available

DOT Code No.	Occupation	Total currently employed	Workers needed for expansion and replacement in:		Local labor supply available in:		Workers currently unemployed	Net Training needs	
			2 Years	5 Years	2 Years	5 Years		2 Years	5 Years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Instructions for Completing Table 3

Table 3 presents a comparison of occupational labor supply and demand estimates.

Column 1, Occupation: List by DOT code number and title each occupation in the survey.

Column 2, Total currently employed: Enter for each occupation, the employment total for the occupation from column 2, Worksheet D.

Columns 3 and 4, Workers needed for expansion and replacement: Enter for each occupation the total additional requirements data from columns 7 and 8, Table 1.

Columns 5 and 6, Local labor supply available: Enter for each occupation the total labor supply data from columns 8 and 9 Table 2.

Column 7, Currently unemployed: Enter the number of unemployed in each occupation. This information may be obtained from local employment office work application files or from Worksheet E, if used. Care should be exercised to select only those workers who can reasonably be expected to meet the skill and other essential requirements for employment in the specific occupations.

Column 8, Net training needs, 2 years: Enter for each occupation the difference between column 3 minus the sum of columns 5 plus 7. If supply is greater than demand, enter the figure in parentheses.

Column 9, Net training needs, 5 years: Enter for each occupation the difference between column 4 minus the sum of columns 6 plus 7. If supply is greater than demand, enter the figure in parentheses.

III. PRESENTATION OF AREA SKILL SURVEY FINDINGS

When the collection, tabulation, and analysis of data are completed, the findings of the study should be presented to the general public. Employers and workers, the sources of labor demand and supply in the area, and other interested persons should know the facts concerning the local occupational situation. Obviously this cannot occur if the survey findings are kept for internal use of the State agency. The following suggestions might aid in the effective presentation of area skill survey results.

The presentation should be designed so as to attract and hold the interest of prospective readers. In some instances, both a popular version and a full report may prove most useful in bringing survey findings and recommendations to the attention of the public. A suggested arrangement of materials might take the form indicated below. This outline, of course, may be expanded or otherwise altered to meet the needs of a particular area study.

A. Introduction

The introduction to the report should be a concise statement of the survey's purpose, probably no longer than one or two pages. It might include a description of the need for specific information on present and future demand for the skills covered by the survey (a) as an aid to providing adequate supplies of trained manpower; (b) as a means of providing better job opportunity information for youth; and (c) as a means of furthering community growth.

B. Acknowledgements

Cooperation and aid received in making the study should be acknowledged either in the introduction or, if such acknowledgements are numerous, in a separate section immediately following it. The acknowledgement should note that the report was prepared in cooperation with the U.S. Employment Service, U.S. Department of Labor. Other public and private sources of assistance should be listed as appropriate, together with a brief statement of their role in the survey.

C. Summary of Findings and Actions Recommended

A short, general synopsis of findings should be covered in this section. Most important would be a listing of occupations in prospective short supply. The Area Manpower Council or other sponsoring or advisory body should make recommendations for future courses of action based on survey findings, and these recommendations should be included in the report. In the absence of a central recommending body, the Employment Service should make the recommendations.

D. Economic Characteristics

The main body of the report should be preceded by a background statement which serves to relate the area skill survey to other aspects of the labor area. The following topics might be covered in the section.

1. Area definition and general characteristics: This section might indicate the area's location in the State, giving the counties, or parts of counties included. Where available, reliable population and labor force estimates for the area should be given. If possible, 2- and 5-year projections of these statistics should be included. If the area has more than one large city, the population and employment concentration should be indicated. Other outstanding special features of the area, such as its rank in size in the State or nationally, etc., should be described.

2. Industrial characteristics: A description should be given of the industrial nature of the labor area, emphasizing the basic industries which employ the largest numbers of workers. Special features should be cited, as for example, that the area is an important retail and wholesale center for a larger territory, or, that it is a one-industry town.

3. Employment trends: This section should describe trends in the area's total employment and in employment in the area's basic industries. Overall changes in employment and unemployment levels from 1950 to the present as well as significant recent changes, should be mentioned. Factors responsible for the change should be noted, emphasizing those industries and occupations which are important to the area economy.

E. Findings

This is the substance of the report. There should be presented here a careful analysis of the data obtained in the survey. Tables 1, 2, and 3 from Section H, Summarizing the Data (p. 34), modified as necessary should be included. Division of the findings in this section into the following subsections is suggested as a method of presenting survey findings in a meaningful fashion.

1. Occupational requirements: This subsection should include an analysis of current employment levels and future employment requirements in surveyed occupations. Periods of reference for these requirements should be the 2-year and 5-year intervals suggested in the above section on area skill survey methodology.

The analysis should be based on: (1) data received from employers on the number of additional workers that will be needed in the surveyed occupations because of contemplated expansion of industrial activities, and estimates developed by the local office regarding replacement of workers who will withdraw from the labor force;

(2) estimates of staffing needs for new industries expected to begin operations within the area if this information can be developed; (3) total additional requirements which represent the sum of (1) and (2) above.

2. Training output: The labor supply which will become available locally in 2 and 5 years for the surveyed occupations should be examined. Analysis should be made of the components of this supply which are (1) the estimated trainee output and promotions in the surveyed establishments, and (2) the estimated output of qualified workers from area vocational and technical schools. The estimates of local labor supply should be adjusted, where possible, to allow for immigration and outmigration of workers.

3. Demand and supply of workers for specific occupations: The concluding portion of the analysis should be an assessment of the adequacy of the area's total expected training output to meet future expansion and replacement needs in the surveyed occupations. These statistical comparisons should be made with extreme care. Caution is necessary because of possible difficulties in obtaining accurate estimates of the number of trainees who may become available for the occupations. A large error in these estimates would serve to create a false impression of the labor supply available for surveyed occupations. However, a careful examination and analysis of the data combined with knowledge of area conditions should provide useful qualitative conclusions about the adequacy of local training programs.

F. Methodology

A description should be made of the procedures and techniques used in conducting the survey. Include a description of criteria for selecting occupations and industries, notes on survey sampling methods used, and assumptions given to employers for forecasting their labor requirements. Any factors which tend to limit the validity of survey data should be discussed here. Among them would be the fact that the estimates are based on the expectations of those employers already in the area, and usually do not include adjustments for those who might come into or leave the area. Similarly, estimates of the supply of workers would frequently have gaps on the number migrating in and out of the area. Users should also be cautioned that while the forecast figures are presented in precise form to establish the size of the training need, the figures shown are to be regarded as an indication of magnitude rather than as a refined estimate.

☆ U.S. GOVERNMENT PRINTING OFFICE : 1965 O - 793-619